International Journal of Advances in Medicine
Hariprasad S et al. Int J Adv Med. 2017 Dec;4(6):1502-1505
http://www.ijmedicine.com
pISSN 2349-3925 | eISSN 2349-3933
DOI: http://dx.doi.org/10.18203/2349-3933.ijam20174674

Original Research Article

Evaluation of clinical profile of febrile thrombocytopenia: an institutional based study

Hariprasad S., Neha Sukhani*

Department of General Medicine, Raichur Institute of Medical Sciences, Raichur, Karnataka, India

Received: 12 September 2017
Accepted: 02 October 2017

***Correspondence:**
Dr. Neha Sukhani,
E-mail: drnehasukhani1@yahoo.com

ABSTRACT

Background: Most instances of prolonged fevers are examples of surely understood ailments showing them atypically. Thrombocytopenia is characterized as platelet tally less than 1,50,000/µL. This is because of diminished creation, expanded obliteration, and expanded sequestration in spleen. Hence, we planned the present study to analyse the clinical profile of febrile thrombocytopenia.
Methods: The present study included assessment of clinical profile of febrile thrombocytopenia. A total of 200 subjects were included in the present study. At the time of diagnosis, complete detailed history of all the patients was taken along with thorough clinical examination. Etiologic and clinical data of all the patients was recorded and compiled. All the results will be analysed by SPSS software 16.0.
Results: Out of total 200 cases included in the present study, fifty-two cases were due to viral fever while fifty-seven cases were due to malaria. Jaundice and cough was present in 52 and 58 cases respectively. In fifty five percent of the cases, platelet count was between 50000 to 10000 per cubic mm.
Conclusions: Infectious diseases accounts for most of the cases of febrile thrombocytopenia.

Keywords: Febrile, Fever, Thrombocytopenia

INTRODUCTION

Fever is an inescapable and pervasive topic in human myth, workmanship and science. Fever is such a typical sign of disease that it is not astonishing to discover precise depictions of the febrile patients in early-written history. Most instances of delayed fevers are examples of surely understood ailments showing them atypically.[1-3] The real example of realistic recording of fever is variable that it is not useful in indicating particular analysis constantly a forceful symptomatic exertion is generally legitimized in light of the fact that remedial or palliative measures would so be able to frequently bring into utilization once the finding has been accomplished. Fever is characterized as a rise of the body temperature over the ordinary circadian range as the consequence of an adjustment in the thermoregulatory focus situated in the front hypothalamus. Despite the fact that thrombocytopenia is experienced in different illnesses, it is for certain that possibly lethal seeping because of thrombocytopenia is rare.[4-6] Thrombocytopenia is characterized as platelet tally less than 1,50,000/µL. This is because of diminished creation, expanded obliteration, and expanded sequestration in spleen.[7] Hence, we planned the present study to analyse the clinical profile of febrile thrombocytopenia.

METHODS

The present study was conducted in the department of haematology and general medicine of the medical institute and included assessment of clinical profile of

febrile thrombocytopenia. A total of 200 subjects were included in the present study. Ethical approval was taken from institutional ethical committee and written consent was obtained from all the patients after explaining in detail the entire research protocol.

Inclusion criteria

- All the patients more than 12 years of age,
- All the patients presenting with the complaints of fever (>99.9degree F) with thrombocytopenia (less than 1,50,000/µL).

Exclusion criteria

- Patients less than 12 years of age,
- Patients having afebrile thrombocytopenia,
- Congenital thrombocytopenia.

At the time of diagnosis, complete detailed history of all the patients was taken along with thorough clinical examination. Recording of all the laboratory and technical investigation reports of all the subjects was done. After confirmation of the diagnosis, treatment of the patients was done specifically and symptomatically. In subjects with bleeding complications, platelet transfusions were done if platelet count was <20,000/µL. Etiologic and clinical data of all the patients was recorded and compiled. All the results will be analysed by SPSS software 16.0. Chi-square test and student t test will be used for the assessment of level of significance.

RESULTS

Table 1: Etiologic profile of febrile thrombocytopenia.

Aetiology	Number (200)	% (100)
Viral fever	52	26
Malaria	57	28.5
Dengue fever	54	27
Septicaemia	25	12.5
Leptospirosis	7	3.5
Scrub typhus	5	2.5

Table 2: Clinical presentation of febrile thrombocytopenia cases.

Clinical parameter	Number of case (200)	% (100)
Fever	200	100
Chills and rigors	110	55
Jaundice	52	26
Cough	58	29
Pallor	102	51
Headache	112	56
Breathlessness	49	24.5
Myalgia	125	62.5
Bleeding	61	30.5
Rashes	26	13

Out of total 200 cases included in the present study, fifty-two cases were due to viral fever while fifty-seven cases were due to malaria (Table 1).

In 54 cases, Dengue fever was responsible for febrile thrombocytopenia (Figure 1).

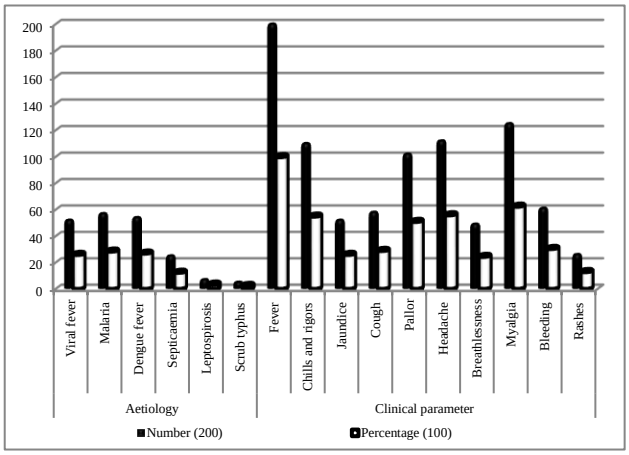

Figure 1: Etiologic and clinical profile of cases of the present study.

Chills and rigors are seen in 110 cases of febrile thrombocytopenia. Jaundice and cough was present in 52 and 58 cases respectively (Table 2). Myalgia was seen in 62.5 percent of the cases while bleeding was observed in sixty-one cases respectively. In fifty five percent of the cases, platelet count was between 50000 to 10000 per cubic mm (Table 3).

Table 3: Severity of thrombocytopenia cases.

Platelet count	Number of cases	%
Less than 20000 per cubic mm	25	12.5
20000 to 50000 per cubic mm	55	27.5
50000 to 100000 per cubic mm	110	55
100000 to 1500000 per cubic mm	10	5

DISCUSSION

Fall in the levels of platelets in the circulatory blood below 1.5 lacs per cubic mm is categorized as thrombocytopenia. These cases are often asymptomatic and are discovered under routine haematological investigations.[8] Hence, we planned the present study to analyse the clinical profile of febrile thrombocytopenia.

In the present study, we observed that malaria was the most common cause of febrile thrombocytopenia (Table 1). Gondhali MP et al evaluated 100 subjects of ages more than 12 years with fever and thrombocytopenia. The most common cause of thrombocytopenia was infection, with Dengue being the most common infectious agent observed. Fifteen percent of subjects showed bleeding as a clinical sign. 14% of patients had

Petechiae/purpura as the commonest draining indication took after by spontaneous bleeding in 10%. Great recuperation was noted in 94% while 6% had mortality. Septicaemia represented 5% of deaths, trailed by dengue 1%. Diseases, especially Dengue were the commonest reason for fever with thrombocytopenia. In the larger part of patient's thrombocytopenia was transient and asymptomatic however in a critical number there were draining indications.[9] Raikar et al assessed the clinical profile associated with fever and thrombocytopenia. A total of 100 subjects were analysed by them who were suffering from fever and thrombocytopenia. In their study, male outnumbered female. Bleeding manifestations was observed in 4 patients only. They didn't observe any correlation between platelet count and bleeding. Dengue, in their study, accounted for majority of the infectious cases. In their study malaria caused mild-to-moderate thrombocytopenia with counts remaining between 50,000 to 1 lacs in most cases. In their study, out of 100 patients only four patients presented with bleeding manifestations. Three patients of mixed Plasmodium vivax with Plasmodium falciparum malaria presented with petechie, purpura and hematuria. One patient of dengue presented with gum bleeding. Platelet count started increasing from 2nd day of admission to 8th day of admission with relative treatment. In their study out of 100 patients three had fever with thrombocytopenia without any bleeding manifestations.[10]

Also, in the present study, headache, fever and chills were the common signs and symptoms observed (Table 2). Fah et al comparatively evaluated the clinical profile of acute febrile subjects with thrombocytopaenia and acute febrile patients without thrombocytopaenia. In the primary health care centre, they selected consecutive patients presenting with undifferentiated fever of less than two weeks. They recorded all the clinical features of the subjects and did Full blood count (FBC) examination. They calculated the odds ratio of thrombocytopaenia for each presenting symptom. Seventy-three patients participated in this study. Among them, 45.2% had thrombocytopaenia. Myalgia and headache were common among all patients. However, nausea and vomiting occurred significantly more often among patients with thrombocytopaenia than in patients with normal platelet count. Acute non-specific febrile patients presenting with symptoms of nausea and vomiting may have higher risk of thrombocytopaenia and should be seriously considered for FBC.[11] Geetha et al analysed the significance of thrombocytopenia in diagnosing etiologies of acute non-specific febrile illness. They evaluated about 130 Patients presenting with acute febrile illness without any obvious etiology of less than two-three weeks. Clinical details were noted and then subjected for routine blood counts, Malaria, Widal and Dengue card test. Card test for Chikungunya and Liver function test was done in selected patients. Of the 130 patients 33% of patients had Thrombocytopenia. In thrombocytopenia cases 41.86% patients were positive for Malaria, 32.55% of patients were reactive for dengue, 4.65% were reactive for chikungunya, no etiology was found in 20.94% cases. On statistical analysis there was a significant association of thrombocytopenia with Dengue and Malaria cases. No significant association was found with Widal and Chikungunya cases. Finding of thrombocytopenia in patients with acute febrile illness raises the suspicion of Dengue and malaria infection.[12-16]

CONCLUSION

From the above results, the authors conclude that infectious diseases accounts for most of the cases of febrile thrombocytopenia. Also, falling of platelet count below 20000 per cubic mm increases the risk of bleeding manifestation.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

REFERENCES

1. Guzman MG, Kouri G. Dengue and dengue hemorrhagic fever in the Americas: Lessons and challenges. J Clin Virol. 2003;27:1-13.
2. Gibbons RV, Vaughn DW. Dengue: An escalating problem. BMJ. 2002;324:1563-6.
3. Thomas SJ, Strickman D, Vaughn DW. Dengue epidemiology: Virus epidemiology, ecology, and emergence. Adv Virus Res. 2003;61:235-89.
4. Pancharoen C, Thisyakom U. Neurological manifestations in dengue patients. Southeast Asian J Trop Med Public Health. 2001;32:341-5.
5. Murthy JM. Neurological complications of dengue infection. Neurology India. 2010;58:581-4.
6. Fariz-Safhan MN, Tee HP, Abu Dzarr GA, Sapari S, Lee YY. Bleeding outcome during a dengue outbreak in 2005 in the East-coast region of Peninsular Malaysia: A prospective study. Trop Biomed. 2014;31:270-80.
7. Wahid SF, Sanusi S, Zawawi MM, Ali RA. A comparison of the pattern of liver involvement in dengue hemorrhagic fever with classic dengue fever. Southeast Asian J Trop Med Public Health. 2000;31:259-63.
8. Makkar RP, Mukhopadhyay S, Monga A, Monga A, Gupta AK. Plasmodium vivax malaria presenting with severe thrombocytopenia.Braz J Infect Dis. 2002;6:263-5.
9. Gondhali MP, Vethekar M, Bhangale D, Choudhary K, Chaudhary M, Patrike G. Clinical assessment of fever with thrombocytopenia-A prospective study. International Journal of Medical Research and Health Sciences. 2016;5(1):258-77.
10. Raikar SR, Kamdar PK, Dabhi AS. Clinical and Laboratory Evaluation of Patients with Fever with Thrombocytopenia. Indian Journal of Clinical Pract. 2013;24(4):360-3.

11. Fah TS, MMed NAA, Liew CG, Omar K. Clinical Features of Acute Febrile Thrombocytopaenia Among Patients Attending Primary Care Clinics. Malaysian Family Physician: the Official Journal of the Academy of Family Physicians of Malaysia. 2006;1(1):15-8.
12. Geetha JP, Rashmi MV, Murthy N. Acute Febrile Illness with Thrombocytopenia-a Common Scenario. Ind J Public Health Res Develop. 2015;6(4):163.
13. Gutthi LP, Vegesna S, Pundarikaksha V, Kolla S, Gundapaneni M, Karimi PK. A study of clinical and lab profile of fever with thrombocytopenia. Internat J Contempt Medic Res. 2017;4(5):1057-61.
14. Sahil N. Fulara, Nasir Y. Fulara. Dengue shock syndrome: an experience from a tertiary level hospital in Mumbai. Internat J Contemp Medic Res. 2017;4(1):173-5.
15. Mital R, Agarwal V, Agarwal A. To Assess the relative incidence of and to compare the hemocytological changes in malaria, dengue and typhoid fever or their combination, in children admitted in a tertiary care centre in western UP, India. Internat J Contemp Medic Res. 2016;3(3):718-23.
16. Kumar PM, Swapna M, Kavitha K, Sudhir U, Sunil HS, Deepak TS. Clinical manifestations and bio-chemical profile of dengue fever in a tertiary care centre. Internat J Contemp Medic Res. 2016;3(3):920-4.

Cite this article as: Hariprasad S, Sukhani N. Evaluation of clinical profile of febrile thrombocytopenia: an institutional based study. Int J Adv Med 2017;4:1502-5.